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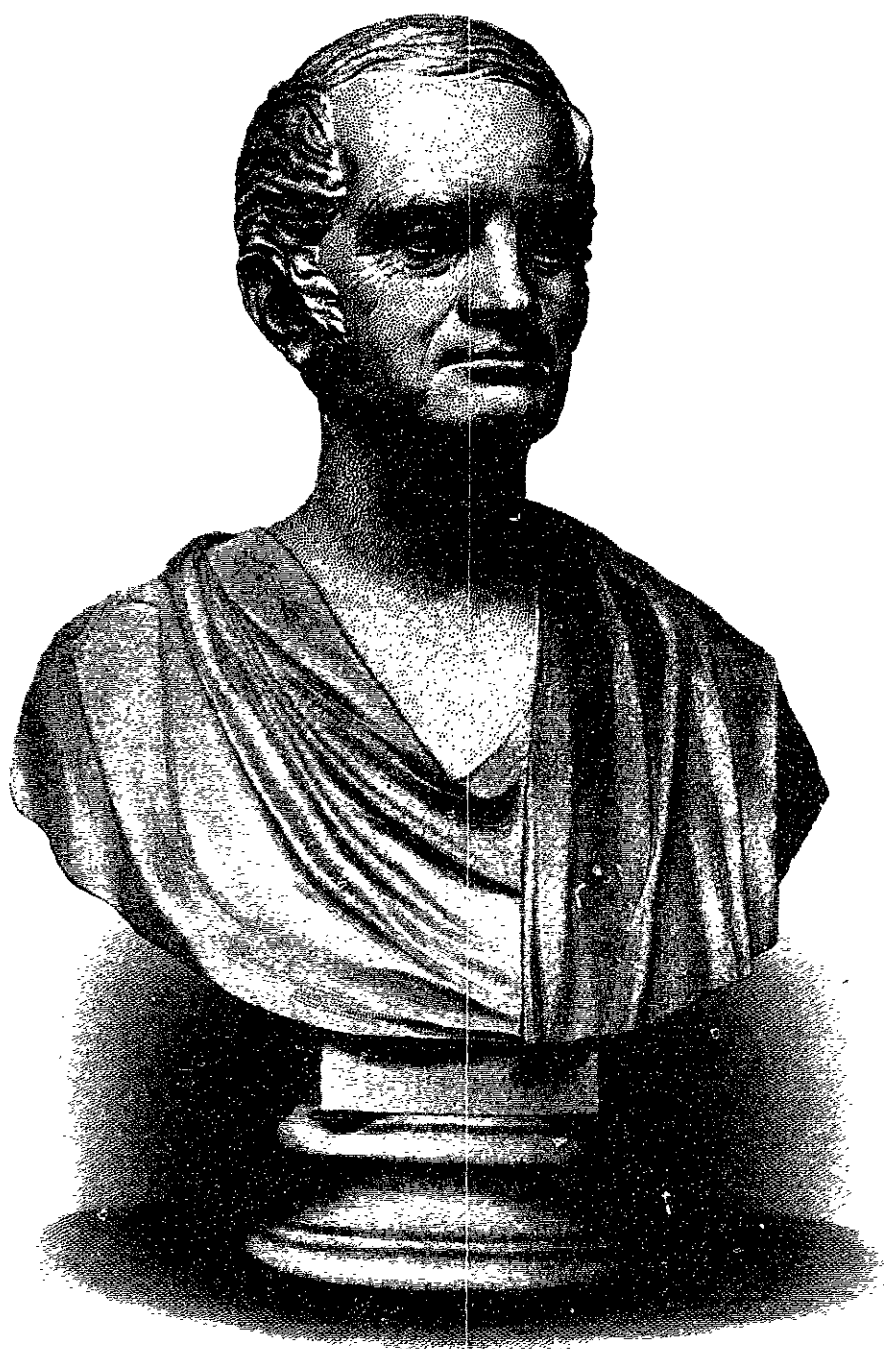
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Jacob Bigelow

The Tech.

VOL. II.

BOSTON, MAY 23, 1883.

No. 16.

THE TECH.

Published on alternate Wednesdays, during the school year, by the students of the Massachusetts Institute of Technology.

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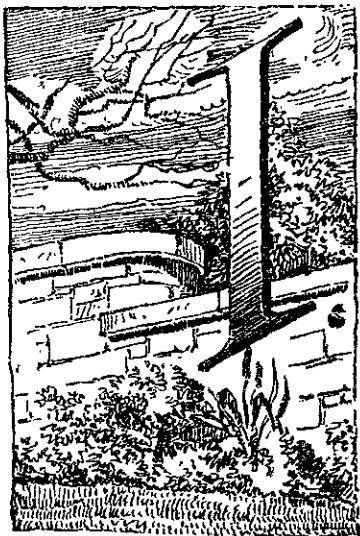
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IN giving our editorial epitaph to the world, or to that portion of it which reads the TECH, we will try to be brief and express our proper emotions of sorrow and our resignation at our readers' bereavement as simply as is consistent. We know that epitaphs are of interest only to special friends of the departed, and we are aware that the editorial epitaph is generally interesting to the writer alone.

With this number, volume two of the paper is completed, and the work of the present editorial board ends. With the departure of '83 from the scientific shades of our institution a majority of the board must cap their stylographs and wash the ink from their fingers for the last time.

We are sorry to leave, and yet we are glad to go.

From the busy world of the future each may at times look back and wish for the good old days again; but when the thought comes of the *nights*, and of the required editorial to be written after an evening's wrestle with mechanics, or of that humorous and interesting article due on the morrow and the clock striking twelve, then will each rejoice that the past is behind, and that the present calls not for such amusements.

With the success of the paper during the year we think the board may be satisfied, if not congratulated. It would be of little use to now detail the plans and desires of the editors when they began the work. If these plans have been successfully carried out our friends have already seen the results, if they have not been successful we had better not speak of them.

To the succeeding board we extend our most hearty greeting and offer the members our best wishes for their success with the coming volume.

To our friends, and in this term we hope we can include all our readers, we tender our last farewell and our parting words of wisdom,

"SUBSCRIBE FOR VOLUME III."

THE Rogers memorial tablet is now finished in the clay, and is ready to be shown to students at Mr. Bartlett's studio, in rear of the Terra Cotta Works, Federal Street. The plaster cast will shortly be taken, and the materials shipped to Paris for the casting. If no unforeseen accident happens, the tablet will be returned before two months, and before the opening of the next school year will be in position on the wall of the entrance hall of the present building, where it is the desire of the committee to have

it placed. The sculptor, Mr. Bartlett, has worked industriously and successfully on the tablet, and is much interested in its early completion. The work of the committee now consists in collecting the subscriptions which have been tendered by members of the various classes. The end of the term is very near, and it is imperative that the amounts subscribed should be paid as soon as possible. At least \$350 or \$400 should be raised, and, if subscriptions are paid, the committee will be able to complete arrangements immediately, and have the tablet in position as above stated. All who have not yet subscribed, or who have not paid their subscriptions, are invited to do so at once to the member of the committee from their own class.

WITH the publication of the present number '83's hold upon THE TECH ceases, and soon those who were foremost in starting the paper, and who have been most diligent in its behalf, since the first issue, will depart never more to hold official connection with it. In many ways they may be proud of themselves as a class, for although it must be acknowledged that '83 has not produced any great mathematical or scientific wonder, yet to no other class do we owe so much for the change for the better in the social life at the Institute, something which, until the last few years, has been entirely lacking. THE TECH, the Athletic Club, $\Sigma M E$, the V. L., 2 G., and the Minstrels all attest the truth of this statement, and we feel confident that when the men of '83 launch out upon the world, with degrees or without degrees, that with them will go the best wishes of all those organizations for which they have done so much.

ON account of the press of work due to examinations and the closing of the term, the editors have found it necessary to delay the publication day of the present number for one week.

Dr. Jacob Bigelow.

DR. JACOB BIGELOW, whose life forms the subject of the third sketch in this series, was, during his lifetime, so well known in the community, and, at the time of his death, was the recipient of so many biographical notices, as well as of complete memoirs by members of the Massachusetts Historical Society and the American Academy of Arts and Sciences, that it would appear almost preposterous to attempt to add anything to the accounts already before the public. His early and close connection with the Institute of Technology, and his profound interest in its establishment and development, will, however, it is hoped, enlist the attention of the readers of this paper to the present sketch.

Dr. Bigelow was born in Sudbury, Mass., Feb. 27, 1787. His boyhood was spent in attending a country school, and in the labors and amusements of country life. Very early he developed a great ingenuity in mechanical contrivances, and was fond of puzzling himself with speculations upon natural objects.

With but slender means at his disposal, the expenses of his college life were eked out, as was then the custom with many students, by teaching country schools during the winter vacations. His college life offered him opportunities, of which he made the most. During the four years at Harvard he joined nearly all the clubs and societies existing at that time. Of these he says: "I was enrolled among the members of different, and sometimes opposite, institutions, — a Theological Society, which was very good, and a Porcellian Club, which was very bad; a Phi Beta Kappa Society, intended to be composed of the best scholars, and a 'Navy' Club, which was above suspicion as containing the worst."

He graduated with the "poem" at Commencement in 1806.

In 1810 he took his medical degree at the University of Pennsylvania.

His first literary attempts were medical essays in competition for the Boylston prizes, three of

which he gained in the years 1811 and 1812. From this time until 1825 he published a number of valuable medical and botanical works, and established himself as an authority upon these subjects.

In 1825 Dr. Bigelow gave the first impulse to the great movement for the introduction of suburban cemeteries, which first found fulfillment in the creation of the cemetery of Mount Auburn in 1831, which has been the pattern after which have been modelled a great number of similar institutions in the neighborhood of all our chief cities and towns. It is hard to overrate the importance of this great innovation on the time-honored custom of close-packed tombs, which was fast becoming a nuisance to public health and an offence to the common feelings of humanity. Dr. Bigelow was for more than twenty years the president of the corporation, and also furnished the designs for the fence and gateway, for the chapel and tower, and strongly advocated the erection of the massive Sphinx which now overlooks and seemingly guards this beautiful burial garden.

In 1829 Dr. Bigelow published the "Elements of Technology," a treatise on the application of the sciences to the useful arts. From this treatise Dr. Bigelow has generally been regarded as the author of the word "Technology"; and Worcester, in his Dictionary, gives him as authority for its use and definition; but in the advertisement of his volume Dr. Bigelow says: "I have adopted the general name of technology, a word sufficiently expressive, which is found in some of the older dictionaries, and is beginning to be revived in the literature of practical men at the present day."

In 1835 was delivered the well-known discourse on "Self-limited Diseases" of which Dr. Holmes says: "This remarkable essay has probably had more influence on medical practice in America than any similar brief treatise, we might say than any work, ever published in this country."

The last of the great public services performed by Dr. Bigelow was in the bold posi-

tion assumed by him in the cause of education, claiming that the classical languages should cease to be the exclusive or chief tests of a liberal training. Prof. W. P. Atkinson had recently called attention to the state of education, especially as it regarded the classics and scientific studies in the great schools of England. Dr. Bigelow referred to this as a convincing exposition of the state of education in these institutions, and in two admirable and energetic essays "On the Limits of Education," and "On Classical and Utilitarian Studies," the first before the Society of Arts, in 1865, and the second before the American Academy of Arts and Sciences, in 1866, he defended his attitude in regard to the subordinate position which the classical studies must hold in the liberal education of the future, and made a practical application of the facts given by Prof. Atkinson to the condition of things among ourselves.

Dr. Bigelow was one of the first whose attention was called to the proposition to reserve lands by the State, upon the newly made area of the Back Bay, for the establishment of a number of educational institutions. While he took great interest in all the proposed institutions, his practical mind immediately led him to especially favor the Institute of Technology. Very early he suggested the reservation of a tract of land, much larger than that needed for the buildings themselves. He foresaw the effect which these institutions would have in enhancing the value, not only of the adjacent lands, but of the whole district, comprising more than four hundred acres. He entered a vigorous plea to induce the Legislature to secure a large tract, of at least twenty acres, which would soon increase immensely in value and give a great profit over cost of filling, and thus a large sum could be obtained for the erection of buildings, and for aid to education in many ways. Had his foresight been appreciated and acted upon, many thousand dollars would have been realized to the Institute without costing the State a single dollar.

The tardiness of the Legislature in granting

the land for the new institution did not discourage him. For four years only rebuffs and delays were encountered, but each year when the subject came up he was the first to say, "Renew the application."

During these four years much vexatious opposition was encountered from various sources. The jealousy of a neighboring institution in seeing a school established of a character such as to seriously interfere with some of her own departments was not the least of these oppositions. Politicians and men of narrow views were aroused and arrayed against the plan, and even a prominent member of the State Board of Education inaugurated a formidable opposition on the plea that the project, if carried out, would seriously interfere with the common schools, a plea that appears to-day as strange as it is absurd.

Despite these opponents Dr. Bigelow continued among the foremost to press the claims of the Institute, and none were more delighted than he when the grant was at last made.

At an early meeting of the Society of Arts, just before taking possession of the present building, he delivered the address before mentioned, on the "Limits of Education." His interest in the Institute continued unabated, and, until the infirmities of age caused him to give up public duties, he was a constant attendant at all meetings of the government.

His high hopes of the future of the Institute often caused him to speak of it with enthusiasm, inspiring all who heard him with faith in its ultimate success.

With such men to found and guard the early years of the institution, there is little cause for surprise at the success already attained and the widening prospects for its future.

For sixty-seven years Dr. Bigelow was a member of the American Academy of Arts and Sciences, and from 1847 to 1863 he was its president. He was an active and efficient member of the Massachusetts Historical Society and of other learned bodies.

For several years preceding his death, which took place on January 10, 1879, he was unable

to leave his bed, and was further afflicted with total blindness. Despite these afflictions he continued cheerful till the last, and maintained an active interest in the doings of the world, and especially in the gratifying development of his favorite institution, for which he had labored hard and successfully, the Massachusetts Institute of Technology.

The Manufacture of Hair-Cloth.

THE problem of inventing a machine for weaving hair-cloth was one of the most difficult among the various problems encountered in the modern application of the power loom. A peculiarity of the material, which for a long time puzzled inventors, is that it cannot be spliced into a continuous thread, so as to be carried back and forth by a shuttle, but each hair must be used of its natural length. For the same reason, long pieces of cloth are not made entirely of hair, but have usually a cotton or linen warp, while the hair is used only for the weft, the width of the fabric being limited by the length of a hair. The common hair-cloth used for covering furniture has a cotton warp, and is so woven that each hair passes alternately over four or more threads and under one, so that the hair shows principally on the right side of the fabric, and the cotton on the wrong side.

The hair used comes from horses' tails, and varies in length, that from the tails of some Russian horses being forty inches long, and of great evenness, elasticity, and gloss.

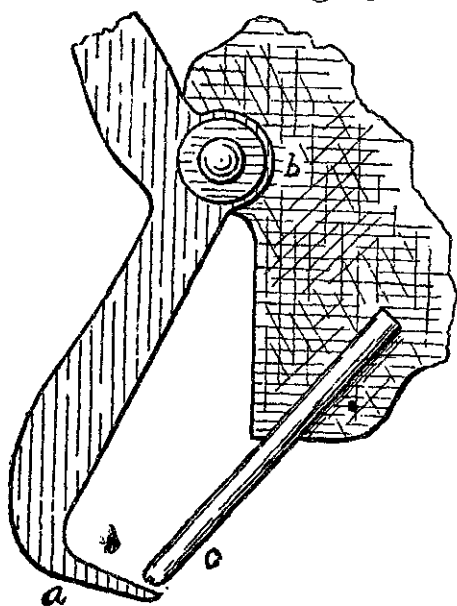
The only cloth made entirely of hair is used for the bottoms of sieves. In Anatolia and Roumelia, however, horse hair is twisted into a coarse yarn, and woven into sackings.

The old method of weaving hair-cloth on a hand loom required two persons, a weaver and an assistant, or "server," who was generally a child. The weaver used a sort of hooked shuttle, which he passed between the threads of the warp toward his left hand. The server's duty was to pick the hairs out of the bunch, tie a loop in the end of each, and place them one at

a time over the end of the hook, which the weaver then drew through the cloth.

Last summer the writer visited the factory of the Pawtucket Hair-Cloth Company, which is a large and substantial brick building on the banks of the Blackstone River, whence water-power is obtained to run four hundred and fifty looms, each producing six yards of hair-cloth per day.

As soon as the hair is received it is sorted, and hairs of the same length are placed together in bunches varying by an inch at a time from sixteen to forty inches in length, thus providing for twenty-five different widths of cloth, from twelve to thirty-six inches wide. The shorter lengths are sold to brush makers. Most of the hair is dyed black, but some is left of its natural color, and makes gray hair-cloth.



The loom is automatic, requiring only to be supplied with a new bunch of hair whenever one is used up, so that one girl can easily attend to ten looms. The other employees in the weaving room are the section hands and the "needle fixers."

The success of the loom depends upon two exceedingly ingenious devices, one for picking a single hair out of the bunch, thus performing the functions of the "server," and another by which the further operations of weaving are made to depend upon this hair being picked up and properly drawn through the warp.

Above one end of the bunch of hair, which lies horizontally in the machine, is placed a device whose action resembles very much that of the human thumb and finger. Its principle will be understood from the accompanying enlarged sketch. A curved steel arm *a* is pivoted at *b* to a plate, from which there projects a straight steel wire *c*, called a needle, which has in its lower end a minute notch just large enough to

admit a single hair and no more. These form a pair of nippers, which are pushed down, while open, into the bunch of hair and brought together, the bunch being moved slightly back and forth, so as to bring different portions of it under the needle. The ends of some of the hairs are slid or rolled between the jaws *a* and *c*, and a single hair is caught in the notch, where it is held by the piece *a*. The machine can pick only one hair from the bunch at a time, because the notch is not large enough to admit more. Sometimes, however, it fails to get hold of any, in which case it instantly comes down and tries again, making three attempts to pick up a hair while the lay is beating up; but as soon as it succeeds in getting one, the hair itself, in being drawn up from the bunch, presses against a wire, and thus, by suitable connections, prevents the needle from returning to make another attempt.

In these looms the ordinary shuttle is replaced by a long, wooden rod provided at one end with nippers, which take hold of the hair after the needle has drawn the end of it up from the bunch and pull it through the warp. If, as occasionally happens, the needle has missed in all three of its attempts to pick up a hair, it cannot of course deliver any to these nippers, and, consequently, none is drawn through the warp. In this case a wire, which is ordinarily supported by resting on the hair, falls, and thus throws out of gear the mechanism for actuating the harnesses and the take-up. Thus, though the motions of pulling through the weft and beating up always go on, the take-up and the harness motion act only in case a hair is actually drawn through. This device insures that any failure of the needle to pick up a hair can never cause a fault in the cloth. After the weaving is done the projecting ends of the hairs are trimmed off, and the cloth is finished by pressing between hot iron plates. The writer came away from the Pawtucket Hair-Cloth Mill impressed with the idea that no problem in machine design is too difficult to be solved by well-directed and patient study.

G.

Fragment of Cicylonian History.

AND it came to pass in the reign of the "Great King" that a new prince was appointed to rule over the people of Cicylonia; the name of this prince was Disorder, which is called in the Cicylonian language No System. Although this prince had come from a foreign country, and was clad in the rigidly simple dress of his native land, yet so pleasing was his manner that the people, being called together after much delay, received him kindly.

He promised them with an eloquent tongue that their lands, their cattle, and their goods should increase, that their crops should be abundant, and that they, being successful in war, should rule over the neighboring tribes and become the best in the land.

The first year, however, passed away and brought no crops, no cattle, and no lands, and the people began to murmur among themselves.

And it came to pass in the second year of his reign that the prince called the people together and commanded them to prepare their fields and to sow them with corn. And the people did as they were commanded; but before the corn was all sown the prince came again and commanded them to cease sowing and to gather up the corn and restore it to their storehouses, and to sow their fields with wheat. For four days the people labored as they were told, and on the fifth, just as night was approaching, the last of the corn was taken from the ground and the people returned to their dwellings.

In the eleventh hour of the night the prince, walking alone in the streets, as was his custom, met one of his subjects and commanded him to sow barley in his field. The following day the people went forth to sow, — this man with barley and the others with wheat.

When this became known to the prince he was exceeding wroth because all had not sown barley. After this he shut himself up and was not seen for many days. And when the people complained of his procrastination he comforted them by answering, "next year."

The prince had it in his power to grant many

favours and fill many offices. Now he was accustomed at times to appoint a number of his people to the same position, and when they came to consult him he would dismiss them with an excuse; so that people began more greatly to murmur and to worry much concerning the "next year."

In the third year of his reign it came to pass —

The Tech Dinner.

AS the warm sunshine of Indian summer precedes the chilling blasts of winter, so came THE TECH dinner before the dreary annuals. While, without, the gloomy and oppressive shadow of the old building fell like a pall over the Brunswick, within were assembled the officers of THE TECH, comprising the wealth and beauty of the Institute, together with the advertising agent.

An ordinary observer might suppose this assemblage to be nothing more than a meeting of bank directors or a railroad syndicate, so modest and unostentatious were the preparations. Here the portly sporting editor was talking earnestly with a florid director in regard to a slight deficiency on the Senior ball, and there a sinister-eyed director was leering smiles on the Freshman editor to whom he was trying to explain something that evidently came hard. A tall, nervous gentleman, with a real mustache and retreating hair, whose commanding presence and elegant deportment marked him as a leading spirit, was talking finance with a pale, careworn director, while in close proximity the handsome editor-in-chief, amid a group of menials, toyed with his mustache and smiled a genteel, seven-words-to-the-line smile as the end man reeled off a minstrel squib or laboratory local from his imagination.

But now the portals beyond the hall swung on their well-greased hinges and revealed a tempting vista beyond the gates ajar.

The company filed into the dining-room with an immaterial-whether-I-go-or-not air, and as soon as it was ascertained that no detectives

in citizens' clothes were present, the president of the board stole quickly into his chair, and with a graceful wave of the hand began the ceremony.

Then it was noticed that there was a vacant place and that the ministerial secretary was absent. It was explained that his health was unequal to the pressure of Senior balls, minstrel entertainments, and other debauches, hence his non-appearance. Resolutions of regret were passed, and a large plate of corned beef laid aside for him. The dinner itself was a sample of the skilful cooking and excellent service which characterize the Brunswick. (See advertisement in another column.) While the courses were being served the reporter was engaged in some original investigation which would be of little interest to the general reader, — and at this point we deem it advisable to introduce our hero. Mr. Leonard arose, and in a few words (five, as we remember) introduced Mr. Chase as *rex convivii*.

In entering upon his duties, Mr. Chase, in a most fitting sentiment, proposed the memory of Professor Rogers, after which the following toasts were responded to: —

- "THE TECH," Mr. Leonard.
- "The College Press," Mr. Little.
- "The Architects," Mr. Eppendorff.
- "The Mechanicals," Mr. Gale.
- "The Civils," Mr. French.
- "The Electricals," Mr. Litchfield.
- "The Miners," Mr. Tenney.
- "The Gymnasium Committee," Mr. Bunce.
- "The Freshmen," Mr. Gamwell.
- "C. C. M. I. T.," Mr. Locke.
- "Athletics," Mr. Robinson.
- "The Ladies," Mr. Smith.
- "Our Advertisers," Mr. Hardon.

The speeches were received with much [applause] and [laughter], except in the case of Mr. Gale, who held his audience spell-bound while he dragged mythical heroes from antiquity and introduced them as hard-working mechanicals.

Mr. Chase introduced the toasts very happily,

and when he proposed "The Miners," whose creed is 1st Hen, 2d Len, 3d Ten, one member was so affected that he accidentally drank the toast in vinegar. The remarks of the exchange editor, in which he compared THE TECH to other college papers, were extremely interesting and reassuring. When the advertising agent arose, and prefaced his remarks by a slight tremor of that red eyelid, it was evident that he had something to say; and it will take long years to efface from our minds the memory of that nervous Choaterian eloquence as he held the floor amid a storm of napkins.

The wisdom of the toast-master in giving this speech the last place now became apparent. The company immediately began to disperse.

The reporter glanced at the drooping eyelid, and, seeing that it indicated twelve o'clock, hastened away to revise his notes for the morning edition. As he passed through the hall, he caught these momentous words from the lips of the irrepressible dude, "Isn't this my coat? Well, that proves it."

'83 Class Dinner.

DURING her four years' course at the Institute, '83 has not been backward in entering heartily and actively into the continuance of time-honored customs and the establishment of new projects which have taken hold upon the interests of the students. Throughout the course the class purse-strings have been loosely tied, and on all occasions her members have been found ready to subscribe to worthy objects, and to spend their money and time that others as well as themselves, and sometimes to the exclusion of themselves, should gain enjoyment. It is therefore with especial pleasure that we chronicle the event of the first — and the last — class dinner; for '83 has preferred to spend her money for other objects, and only regale herself with a single banquet. But the success of this affair and the pleasure enjoyed by all who took part bring out clearly the fact that had the class seen fit to have had its annual dinners, as many other classes have

done, the occasions would have given no little pleasure to the classmen and would have been remembered long afterward.

On Wednesday evening last, four fifths of the class of '83 met at eight o'clock in one of the pleasant dining-rooms at Young's Hotel, and sat down to a sumptuous repast with all the delicacies in and out of season.

After a thorough discussion of the viands, enlivened by general jollity all around the table, Mr. Leonard, toast-master of the evening, proposed a series of toasts, which was responded to by appropriate members of the class in speeches which were at least resplendent with that soul of wit—brevity. After a thorough toasting of all the subjects, including the usual slight broiling of some of the honored Faculty, the evening was concluded by a number of songs by Messrs. Tenny, Mansfield, Kerr, Leonard, and others. The party broke up about twelve o'clock, and adjourned to the open air where our amateur astronomer explained the curious natural phenomenon of a double moon, by referring to the well-known sun-dogs.

Σ. X. Dinner.

THE first annual dinner of the Σ. X. Society, A. Θ. chapter, was held with great success on Thursday May 10, at Young's Hotel. There were twelve members present. Mr. Chapman was elected toast-master, and the following toasts were given:—

"President and Vice-President," responded to by Mr. Baldwin.

"Our Alma Mater," responded to by Mr. Pierce.

"Absent Members," responded to by Mr. Harriman.

"Ladies," responded to by Mr. T. C. Du Pont.

"'83," by Mr. Bardwell.

"'84," by Mr. Du Pont.

"'85," by Mr. Chapman.

"'86," by Mr. Percy.

As it had been decided that the speeches

should be limited to sixty seconds each, the table was kept in very good-humor.

Mr. Chapman then gave a recitation, and the songs "Sailing" and "While Standing in the Gut-tar," were sung by Messrs. Pierce and Boss. A business meeting was then held, and the officers for the coming year elected. Mr. H. F. Baldwin was elected president.

C. C. M. I. T.

THE annual prize drill of the Cadets took place in the large hall of the Mechanics' building last Saturday afternoon, and was witnessed by a large and attentive audience, consisting mostly of young people.

At two o'clock line was formed, and the battalion reviewed by Gen. Walker. Major Richards then put the battalion through an interesting series of movements, which was followed by the drill for company prize, in the following order: Co. A, Capt. Sidney Williams, Co. B, Capt. N. G. Robertson, and Co. C, Capt. Frank L. Locke.

Then came the competitive drill for individual medals. The squad, consisting at first of twenty competitors, was thinned out, first to fourteen, then to ten, afterwards to four, and finally it came to a decision between two, as to who should have the first prize.

The last four men were Sergt. Cobb and Corp. Pope, of Co. B, and Sergt. Clifford and Corp. Tucker, of Co. C.

The medals were awarded, the first to Corp. H. Judson Tucker, of Co. C, and the second to Sergt. H. E. H. Clifford, also of Co. C.

The company prize, a handsome white and blue silk guidon, was awarded to Company C.

The judges were: Gen. Hobart Moore, Capt. Charles L. Hovey, 1st Regt., M. V. M., and Capt. L. N. Duchesney, 9th Regt., M. V. M.

After the drill the Cadets and their friends devoted themselves for an hour and a half to very enjoyable dances. Shortly after six the party broke up, all expressing themselves well pleased with the afternoon's entertainment.

Athletics.

THE management of the Athletic Club has, after due consideration, decided to hold no out-door meeting this spring. From a pecuniary standpoint the former out-door sports have been failures, and this fact, due to the impossibility of having the games until after the annual examinations, and hence after most of the students have gone home, has principally influenced the club in this decision. The records of the former games have been better than the average and worthy of larger audiences than have graced the meetings. The following records made by the club last spring, at Beacon Park, are a fair specimen of the work done: Putting the shot, won by Harriman with a record of 31 ft. 9 in. Hundred-yard dash, won by Du Pont; record, 10 $\frac{3}{4}$ secs. Quarter-mile run, won by Haines in 57 secs.

The Union games are to take place the 26th of this month at the South End Base-Ball Grounds. The following events are open: Hundred-yard dash, handicap (seven yards limit); running high jump; one-mile walk (handicapped). Several of the Institute men have entered.

The Princeton lacrosse team have played four games this season and received their first defeat at Harvard last Saturday. They played a strong game, but Harvard's team showed itself vastly superior, and well sustained the record made recently with the New York University, by a score of 3 goals to 0.

In the pole vaulting at the class games at Princeton, May 11, Toler, '85, took first place with 10 ft. 1 in.; Harriman, '83, second with 9 ft. 11.; thus beating the college record by 7 and 5 inches respectively.

Three hundred men now belong to the Lacrosse Association at Harvard.

Mr. Barrett L. Chandler, '84, has accepted a very advantageous situation in the extensive varnish manufactory of Valentine & Co., New York City.

Noticeable Articles.

FORTNIGHTLY, for April. — "The European Terror" (Socialism and Nihilism), and CONTEMPORARY, for April, "The Progress of Socialism"; both by Emil de Laveleye, the eminent Belgian writer on politics and political economy.

FORTNIGHTLY, for April. — "The Production and Life of Books," by C. Kegan Paul, a graduate of Oxford, now a London publisher.

"A Tour in the Troad," by Prof. R. C. Jebb.

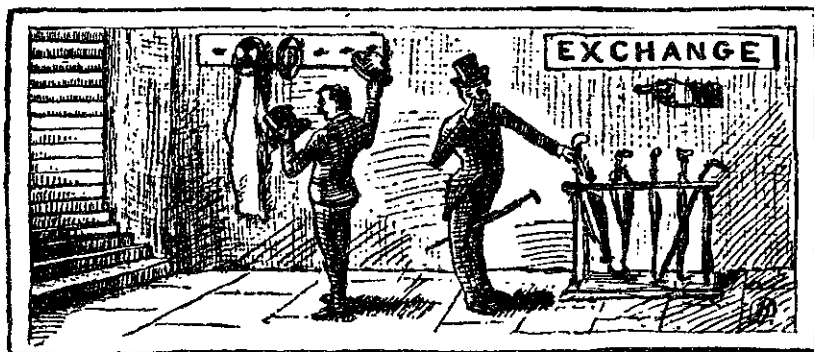
CONTEMPORARY, for April. — "The Manchester Ship Canal," by Major-Gen. Hamley: a gigantic engineering project.

"Gambetta," by R. W. Dale. "On the evening of Sunday, Jan. 7, I happened to be preaching to young men, and was protesting against that ignoble conception of human life which attributes to circumstances an omnipotent power over character, and finds the chief explanation of human virtue and vice in our environment. I was telling them that environment counts for much, but that the personal life which the environment solicits and provokes into activity counts for more; that circumstances may reveal and develop character, but that it is only in the poorest and least energetic natures that they can be said to create it. In illustration of these remarks, I spoke of M. Gambetta." On the other hand, he says, "His premature death may have been the result of the tremendous strain upon his physical strength during the war; but there seems some reason to believe that his constitution was also seriously impaired, not by the reckless vices which I believe were falsely attributed to him, but by the want of that firm discipline of his physical life, which is no inconsiderable part of morality."

NINETEENTH CENTURY. — "What shall I do with my Son?" by Major-Gen. the Hon. W. Fielding. Gen. Fielding's account of English education is not complimentary, — "Four or five years spent in obtaining sufficient education in classical knowledge to enable them to translate correctly a Latin and perhaps a Greek inscription in after years, — the chief acquirements one or two life-long friends, many acquaintances, and considerable practice in cricket, foot-ball, or rowing. . . . For all practical purposes, lads learn at most of our high-class public schools nothing, or next to nothing, which will enable them to enter direct from school into the business of life." His remedy is agricultural training schools preparatory to organized emigration. A few Institutes of Technology would not seem to be a bad addition to his prescription.

QUARTERLY REVIEW, for April. — "Mexico"; review of a book entitled "Mexico To-day: a Country with a Great Future," by T. A. Brocklehurst.

WESTMINSTER REVIEW, for April. — The Carlyle-Emerson Correspondence. W. P. A.



FAREWELLS and separations are the order of the hour; old ties are being broken, not to be renewed perhaps until long after we have ceased to brush the hair so carefully over the shining vacancy that by and by will mark the absence of a crown. It's the bane of college life, — and of life in general, for that matter, — this making of friends only to go down to the train to see them off.

We have carefully examined our exchanges for precedents to follow in this trying time, and from them we discover that it is quite the necessary thing for the retiring editors to wipe their eyes in public in the final number. We have gone through the ceremony, and now we put the rain-gauge with its briny contents away upon the shelf to take the reading when we're more composed.

A movement towards the abolition of the exchange column has been for some time noticeable among the college press, and it is, we are convinced, a movement to be encouraged. The information that the *Brunonian* has twelve pages and a brown cover, and is on the whole a very good sort of paper, is not intensely interesting to the majority of readers, and yet the average exchange column is made up of items not much better or much more interesting to anybody except the editors of the paper immediately concerned. When we undertook the management of the column we believed that it had not entirely outlived its usefulness, and that by containing each time one or two editorials upon matters of collegiate interest it could be made a necessary department of the paper. Now, however, after considerable experience, we have been forced to the conclusion that the space usually devoted to an exchange column

can be more advantageously given to something of wider interest. With this explanation we shall hereafter substitute for the column a department of general college news and comment upon matters which may be interesting to the college world.



WILLIAMS College offers to give \$1,500 for new athletic grounds for the students, provided the alumni will subscribe \$1,000 more.

A blood relation — a tragical tale.

Government pastry — a mint spy.

A Lawn Tennis Association has been formed at Brown.

FOR MAKING A HARVARD MAN.

Take a lump of egotism,

Add a slice of scepticism,

Mix them well together with a "culchaired" Boston drawl;

Add a little Darwinism,

Just a smack of positivism,

And flavor with the essence of unmitigated gall.

— *Acta*.

A pair of slippers — orange and banana peels. — *Ex*.

"David Garrick" is to be produced by the Princeton Seniors.

A number of Bowdoin Sophomores have left that college to go to Dartmouth.

The Princeton College Glee Club has just made a tour as far west as Chicago.

Some of the students of Michigan University are to give a performance of "Iolanthe."

The Freshman crew is thought to be the fastest of the class crews on a short-distance pull. — *Harvard Advocate*.

The old proverb, "Where there's a will there's a way," has been revised to meet the situation. It now reads, "When there's a bill we're away."

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A small boy describes a policeman's uniform as a law-suit.

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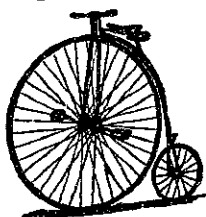
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“Yes; and you say that you could never love any girl half as much as you love me. That's just what you told my Cousin Clara last week.”—
Spectator.

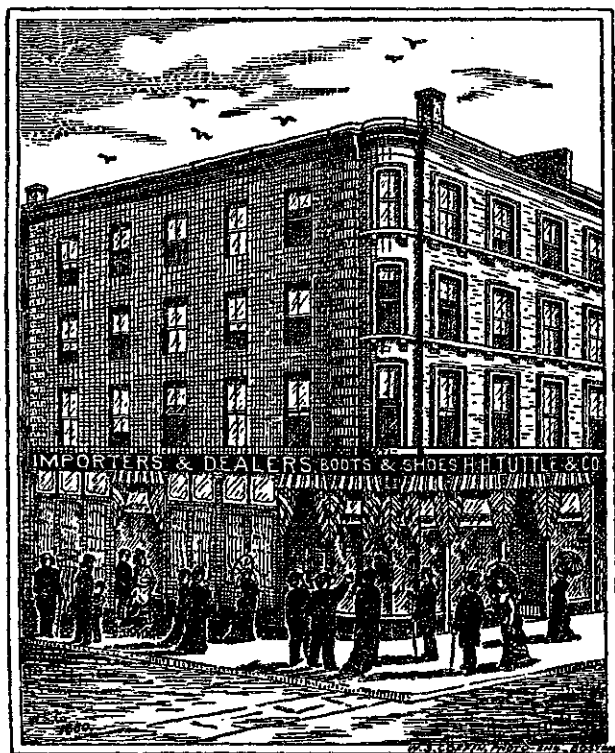
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Besides the above distinctly professional courses, the Institute offers scientific courses of a less technical character, designed to give students a preparation for business callings through the medium of a scientific training.

Modern languages are taught so far as is needed for the ready and accurate reading of scientific works and periodicals, and may at the option of the student be further pursued as a means of general training.

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A clear admission paper from any college of recognized character will be accepted as evidence of preparation in place of an examination.

Graduates of colleges conferring degrees are presumed to have the necessary qualifications for entering the third-year class in any of the regular courses of the Institute, and will be so admitted provisionally, on the presentation of their diplomas.

The feature of instruction which has been most largely developed in the school is laboratory training, shop-work and field practice, to supplement, to illustrate, and to emphasize the instruction of the recitation and lecture room.

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